PROGRAM-RELATED FATALITIES

MICHIGAN 2000

MIOSHA Information Division
Michigan Department of
Consumer & Industry Services
May, 2001
Reference Number 184125

CONTENTS

CONTENTS (Continued)

INTRODUCTION

The latest National Census of Fatal Occupational Injuries data shows that 6,023 fatal work injuries occurred in 1999. In Michigan there were 59 program-related fatalities reported in 2000 or about 1.0% of the national total. Program-related fatalities in Michigan are recorded and tabulated by the MIOSHA Information Division, Bureau of Safety and Regulation, Michigan Department of Consumer and Industry Services. The sources of data include the Basic Report of Injury - Form 100 and telephone reports of fatalities to the Bureau of Safety and Regulation. The conditions necessary for a fatal case to be program-related are given in the NOTE ON PROGRAM RELATED CASES (see page 8).

Program-related fatalities have been recorded since 1975 in Michigan. A high of 115 program-related fatalities occurred in 1977. There was a gradual decrease until 1983 when 52 program-related fatalities were recorded. Program-related fatalities increased from 52 in 1983 to 74 for 1986. A two-year decline to 64 cases in 1988 was recorded before an increase to 76 program-related fatalities in 1989. Between 1989 and 1993 the number of fatalities recorded dropped to 51, showing a reduction of about 54 percent from the number of cases in 1978. There were 61 program-related fatalities recorded during 1994, this decreased to 48 program-related fatalities in 1995 and decreased again to 46 program-related fatalities in 1996. This is 58.6 percent lower than the 111 recorded in 1978 and the lowest number of program-related fatalities recorded in over 20 years. The 76 program-related fatalities recorded in 1997 is 31.6% lower than the 1978 figure of 111. The number of fatalities decreased from 76 in 1997 to 68 in 1998 before increasing to 87 in 1999. Fifty-nine program-related fatalities were recorded in 2000.

The intention of this report is to contribute to a further understanding of program-related fatality profiles and hence, to the continued effort of preventing and reducing fatal cases. Information presented in this report may be of interest to employers and employees, in general, and safety professionals and consultants, in particular. Any inquiries regarding this report may be addressed to:

MIOSHA Information Division
Michigan Dept. of Consumer & Industry Services
7150 Harris Drive, Box 30643
Lansing, Michigan 48909-8143
Telephone (517) 322-1851

PROGRAM-RELATED FATALITIES MICHIGAN 2000

This program-related fatality information for Michigan was compiled from the "Employers Basic Report of Injury", Workers Disability Form 100s and from direct telephone reports of fatalities to the Bureau of Safety and Regulation. Only fatal cases that are program-related, as defined by the Bureau of Safety and Regulation, Michigan Department of Consumer and Industry Services are compiled. Therefore the data does not include fatalities resulting from heart attacks, homicides, suicides, highway personal motor vehicle trips and aircraft accidents. The figures are shown in Tables 1 through 12.

The number of program-related fatalities declined from 115 in 1977 to 52 in 1983 gradually increased to 74 in 1986 before declining over the next two years to 64 in 1988. Program-related fatalities in Michigan during the calendar year 1989 increased to 76 before again declining over the next two years to 60 in 1991. Michigan recorded 61 program-related fatalities in 1992, then declined to 51 in 1993 before increasing to 61 in 1994. Program-related fatalities decreased over the next 2 years to an all time low of 46 program-related fatalities in 1996 before increasing to 76 in 1997. Sixty-eight program-related fatalities were recorded in 1998, a ten percent decline from 1997 before increasing to 87 in 1999. Program-related fatalities dropped to 59 in Michigan for the year 2000. A definition of program-related cases can be found on page 8 of this report. Program-related fatality trends are shown in Table 1.

This report is an overview of how the fatalities were distributed across industry groups; occupations; sources of injury or illness; events or exposures; parts of body affected; and nature of injury or illness. Frequencies of fatalities by age group, gender, month of occurrence and counties of occurrence are also provided.

Table 2 shows the trend in the distribution of program-related fatalities by industry groups from 1993 to 2000.

Beginning in 1999, the industry group category is based on the standard industrial classification (S.I.C.) of the type of job being performed by the employee at the time of the accident. Prior to 1999, the industry group category was based on the standard industrial classification (S.I.C.) of the employer regardless of the type of job being performed by the employee at the time of the accident. This change was found to have minimal impact on the industry group categories.

The largest number of fatalities occur in the Manufacturing and Construction industries. The Agriculture, Forestry and Fishing; Construction; Manufacturing; Transportation and Public Utilities; Retail Trade; and Services industry divisions experienced a decrease from the previous year. Wholesale Trade and Public Administration showed increases in the number of fatalities from the previous year. The industries of Oil and Gas Extraction and Finance, Insurance and Real Estate recorded the same number of fatalities as the previous year. The largest decrease was recorded in Construction recording 9 fewer fatalities in 2000 than in 1999.

Program-related fatalities by occupation are shown in Table 3. The most affected occupation group in 2000 with 16 fatalities was Construction Trades followed by Transportation and Material Moving with 15 fatalities. Handlers, Equipment Cleaners, Helpers and Laborers occupations recorded 8 fatalities, while 5 fatalities occurred in the Farming, Forestry and Fishing occupation group in 2000.

The sources of injury or illness leading to program-related fatalities during 1999 - 2000 are listed in Table 4. Floors, Walkways, Ground Surfaces; (10) Building Materials, Solid Elements; (4) Highway Vehicle Motorized; (8) Containers; (3) Atmospheric & Environmental Conditions (3) and Machine, Tool and Electric Parts; (6) combined, accounted for 34 cases or about 57 percent of the sources of fatal injury or illness.

The number of victims that Fell to a Lower Level during 2000 was ten. Sixteen of the fatalities were the result of being Struck by Objects. Victims being Caught In or Compressed by Equipment resulted in seven fatalities, and Contact with Electric Current accounted for eight fatalities. Table 5 shows program-related fatalities by event or exposure.

Parts of the body affected by fatal injury or illness show that Head, Body Systems, and Multiple Parts, together, accounted for 68 percent of the fatalities. Fourteen fatal injuries or illnesses were specified for both Body

Systems and Head as the part of body affected. Twelve cases recorded Multiple Parts as the part of body affected by fatal injuries and illnesses during 2000. Data is shown in Table 6.

The nature of the fatal injuries or illnesses reported were Electric Shock, Electrocution (8); Internal Injuries of the Trunk (15); Asphyxiation, Strangulation, Drowning, Suffocation (3); and Burn, Heat (1). A significant number, approximately 23 percent, of the fatalities that occurred in 2000, were the result of intracranial injuries to workers. Details of the nature of injuries and illnesses causing program-related fatalities are given in Table 7.

Employees between the ages of 21 and 40 suffered about 49 percent of the fatal injuries and illnesses. There were 2 fatalities to workers under the age of 21. The age groups of 21-25 and 51-55 both suffered 9 fatalities, which was the second highest number for any of the five-year age categories following the age group of 26 - 30 with 10 fatalities. The age groups of 56-60 suffered 6 fatalities. Of the 59 victims, 57 were male employees. The distribution of program-related fatalities by age and gender are shown in Tables 8 and 9.

In 2000, September and December recorded the highest number of fatalities (8). Seven program-related fatalities were reported during February. The months of July and August both recorded 6 fatalities while the months of March, and October each recorded 5 fatalities. November recorded three and June recorded two fatalities. January recorded the lowest number of fatalities with one. Details are shown in Table 10.

Program-related fatalities by industry group and day of the week are shown in Table 11. The highest number of fatalities by day of the week shows Wednesday with 14, followed by Thursday showing thirteen, while Tuesday recorded twelve. Nine program related fatalities were recorded on Friday and seven on Monday. There was one fatality recorded on Sunday in 2000.

The distribution of fatality cases by counties shows that 19 counties reported program-related fatalities in 2000. Wayne County reported the largest (11) and Oakland County showed the second largest number of cases with

ten. Washtenaw county reported 8 fatalities while Kent county reported seven followed by Saginaw county with five. A complete distribution of fatality cases by county of occurrence is shown in Table 12.

Even though Michigan's 2000 total program-related fatality cases are far less than the thousands of cases reported nationwide, the consequences of these on-the-job deaths in terms of human suffering, lost workdays, decreased production, and increased compensation rates are all too significant to be overlooked.

In order for Michigan to reduce the number of on-the-job fatality cases, it requires a conscious effort on the part of employers to recognize and comply with MIOSHA standards, develop and implement safe working procedures and assure that employees observe and practice these procedures. The MIOSHA program offers on-site consultation and safety education and training opportunities to employers and employees alike to help them achieve this goal.

The program-related fatality data for Michigan are presented in the following series of Tables 1 through 12. A brief description of how the program-related fatalities occurred is also provided following the series of tables. The descriptions are listed by industry groups based on the standard industrial classification of the type of job being performed by the employee at the time of the accident and are valuable insights as to how the accidents occurred. The information can be very useful to safety professionals, in particular, for use in prevention planning.

NOTE ON PROGRAM-RELATED CASES

A fatality is recorded as program-related if it appears to be related to one or more of the following conditions:

1. The incident was found to have resulted from violations of MIOSHA safety and health standards or the general duty clause;

2. The incident was considered to be the result of a failure to follow a good safety and health practice that would be the subject of a safety and health recommendation.

3. The information describing the incident is insufficient to make a clear distinction between a "program-related" and "non-program-related" incident, but the type and

nature of the injury indicates that there is a high probability that the injury was the result of a failure to adhere to one or more MIOSHA standards, the general duty clause, or good safety and health practice.

Any further inquiries may be addressed to:

MICHIGAN DEPARTMENT OF CONSUMER & INDUSTRY SERVICES
MIOSHA INFORMATION DIVISION
7150 HARRIS DRIVE, BOX 30643
LANSING, MICHIGAN 48909-8143
(517) 322-1851

TABLE 1

PROGRAM-RELATED FATALITY TRENDS
MICHIGAN 1978 - 2000

YEAR	CASES	PERCENT CHANGE	CUMULATIVE PERCENT CHANGE
1978	111	------	------
1979	89	-19.8	- 19.8
1980	73	-18.0	- 34.2
1981	65	-11.0	- 41.4
1982	67	+ 3.1	- 39.6
1983	52	-22.4	- 53.2
1984	59	+13.5	- 46.8
1985	67	+13.6	- 39.6
1986	74	+10.4	- 33.3
1987	73	- 1.4	- 34.2
1988	64	-12.3	- 42.3
1989	76	+18.8	- 31.5
1990	72	- 5.3	- 35.1
1991	60	-16.7	- 45.9
1992	61	+1.7	- 45.0
1993	51	-16.4	- 54.1
1994	61	+19.6	- 45.0
1995	48	- 21.3	- 56.8

1996	46	- 4.2	-58.6
1997	76	+65.2	-31.6
1998	68	-10.5	-38.7
1999	87	+27.9	-21.6
2000	59	-32.2	-46.8

SOURCE: MIOSHA Information Division, Michigan Department of Consumer & Industry Services

TABLE 2

PROGRAM-RELATED FATALITIES
BY INDUSTRY GROUPS
MICHIGAN 1993 - 2000

	YEARS							
INDUSTRY GROUP	**1993**	**1994**	**1995**	**1996**	**1997**	**1998**	**1999**	**2000**
AGRICULTURE, FORESTRY AND FISHING	3	2	5	1	2	4	2	1
OIL AND GAS EXTRACTION	0	0	1	0	0	0	0	0
CONSTRUCTION	20	28	15	18	32	25	33	24
MANUFACTURING	19	13	16	12	22	22	25	17
TRANSPORTATION AND PUBLIC UTILITIES	8	5	4	5	5	5	10	5
WHOLESALE TRADE	1	3	2	2	1	3	5	6
RETAIL TRADE	0	3	1	1	3	4	3	1
FINANCE, INSURANCE AND REAL ESTATE	0	0	0	0	1	0	0	0

SERVICES	0	6	2	2	8	3	8	3
PUBLIC ADMINISTRATION	0	1	2	5	2	2	1	2
TOTAL	**51**	**61**	**48**	**46**	**76**	**68**	**87**	**59**

Note: Beginning in 1999, the industry group category is based on the standard industrial classification (S.I.C.) of the type of job being performed by the employee at the time of the accident.

Source: MIOSHA Information Division, Michigan Department of Consumer & Industry Services.

TABLE 3

PROGRAM-RELATED FATALITIES
BY OCCUPATION
MICHIGAN 1999 - 2000

OCCUPATION	**NUMBER OF CASES**	
	1999	**2000**
Executive, Administrative and Managerial	5	3
Professional Specialty Occupations	0	2
Technicians and Related Support	1	1
Protective Service Occupations	0	1
Service, Except Protective and Household	6	0
Farming, Forestry and Fishing	2	5
Mechanics and Repairers	9	3
Construction Trades	14	16
Precision Production	6	0
Machine Operators and Tenders, Except Precision	6	3

Fabricators, Assemblers and Handworking	5	2
Production Inspectors, Testers, Samplers and Weighers	1	0
Transportation and Material Moving	9	15
Handlers, Equipment Cleaners, Helpers and Laborers	23	8
TOTAL	**87**	**59**

Source: MIOSHA Information Division, Michigan Dept. of Consumer & Industry Services.

TABLE 4

PROGRAM-RELATED FATALITIES BY SOURCE OF INJURY OR ILLNESS MICHIGAN 1999 - 2000

	NUMBER OF CASES	
SOURCE OF INJURY OR ILLNESS	**2000**	**1999**
Agricultural and Garden Machinery	1	--
Atmospheric & Environmental Conditions	3	11
Building Materials, Solid Elements	4	3
Carbon Dioxide/Monoxide	--	3
Cases, Cabinets, Racks, Shelves	--	1
Coal, Natural Gas, Petroleum Fuels & Products	1	2
Construction, Logging Machinery	2	4
Containers	3	2
Dirt, Earth, Sand, Gravel	1	5
Floors, Walkways, Ground Surfaces	10	10
Food Products, Fresh or Processed	--	1
Handtools - Powered	--	1
Handtools - Nonpowered	--	2
Heating, Cooling & Cleaning Machinery	1	1
Highway Vehicle Motorized	8	7
Horses	--	1

Hydrogen Sulfide	--	1
Ladders	2	--
Lighting Equipment	--	1
Machine, Tool & Electric Parts	6	4
Material Handling Machinery	2	2
Medical and Surgical Instruments	1	--
Metal Materials, Nonstructural	1	2
Metal, Wood, & Special Material Machinery	2	8
Miscellaneous Machinery	1	--
Other Structural Elements	1	--
Plant & Industrial Powered Vehicles, Tractors	2	6
Rail Vehicle	1	3
Skids, Pallets	1	--
Slings	--	1
Special Process Machinery	2	--
Structures, Buildings, Guard Rails	1	3
Tires, Inner Tubes, Wheels	--	1
Trees, Logs	1	1
Vehicle & Mobile Equipment Parts	1	--
TOTAL	**59**	**87**

Source: MIOSHA Information Div., Michigan Dept. of Consumer & Industry Services.

TABLE 5

PROGRAM-RELATED FATALITIES
BY EVENT OR EXPOSURE
MICHIGAN 1999 - 2000

EVENT OR EXPOSURE	NUMBER OF CASES 2000	1999
CAUGHT IN, OR COMPRESSED BY EQUIPMENT	7	15
CAUGHT IN/CRUSHED IN COLLAPSING MATERIAL	1	4
CONTACT WITH ELECTRIC CURRENT	8	9
CONTACT WITH TEMPERATURE EXTREMES	1	1
EXPLOSION	1	5
EXPOSURE TO CAUSTIC, NOXIOUS, OR ALLERGENIC SUBSTANCES	1	5

FALL TO LOWER LEVEL	10	13
FALL UNSPECIFIED	--	2
FIRE	3	12
NON-HIGHWAY MOTOR VEHICLE ACCIDENTS	6	6
HIGHWAY MOTOR VEHICLE ACCIDENTS	--	2
PEDESTRIAN, NONPASSENGER STRUCK BY VEHICLE, MOBILE EQUIPMENT	4	3
RAILWAY ACCIDENT	1	--
STRUCK BY OBJECT	16	10
TOTAL	**59**	**87**

Source: MIOSHA Information Div., Michigan Dept. of Consumer & Industry Services.

TABLE 6

PROGRAM-RELATED FATALITIES
BY PARTS OF BODY AFFECTED
MICHIGAN 1999 - 2000

PARTS OF BODY AFFECTED	NUMBER OF CASES	
	2000	**1999**
ABDOMEN	1	1
BACK, MULTIPLE	1	--
BODY SYSTEMS	14	24
CHEST	1	9

HEAD	14	18
NECK	2	2
MULTIPLE PARTS	12	24
PELVIC REGION	4	--
TRUNK, MULTIPLE	10	9
TOTAL	**59**	**87**

Source: MIOSHA Information Division, Michigan Dept. of Consumer & Industry Services.

TABLE 7

PROGRAM-RELATED FATALITIES
BY NATURE OF INJURY OR ILLNESS
MICHIGAN 1999 - 2000

NATURE OF INJURY OR ILLNESS	NUMBER OF CASES	
	2000	**1999**
ASPHYXIATION, STRANGULATION DROWNING, SUFFOCATION	3	5
BURN, HEAT	1	6
ELECTRIC SHOCK, ELECTROCUTION	8	10

INTERNAL INJURIES OF THE TRUNK	15	18
INTRACRANIAL INJURIES	14	18
MULTIPLE INJURIES	13	20
OPEN WOUNDS	2	--
OTHER POISONING & TOXIC EFFECTS	1	9
OTHER	2	1
TOTAL	**59**	**87**

Source: MIOSHA Information Division, Michigan Department of Consumer & Industry Services.

TABLE 8

PROGRAM-RELATED FATALITIES BY AGE
MICHIGAN 1999 - 2000

AGE	**NUMBER OF CASES**	
	2000	**1999**
20 and Under	2	5
21 - 25	9	15
26 - 30	10	11
31 - 35	5	11

36 - 40	5	10
41 - 45	8	7
46 - 50	3	6
51 - 55	9	9
56 - 60	6	7
61 and Over	2	6
TOTAL	**59**	**87**

TABLE 9

PROGRAM-RELATED FATALITIES BY GENDER
MICHIGAN 1999 - 2000

GENDER	**NUMBER OF CASES**	
	2000	**1999**
MALE	57	81
FEMALE	2	6
TOTAL	**59**	**87**

Source: MIOSHA Information Division, Michigan Dept. of Consumer & Industry Services.

TABLE 10

PROGRAM-RELATED FATALITIES
BY MONTH OF OCCURRENCE
MICHIGAN 1999 - 2000

MONTH OF OCCURRENCE	**NUMBER OF CASES**	
	2000	**1999**
JANUARY	1	2

FEBRUARY	7	11
MARCH	5	14
APRIL	4	4
MAY	4	8
JUNE	2	8
JULY	6	9
AUGUST	6	8
SEPTEMBER	8	3
OCTOBER	5	9
NOVEMBER	3	6
DECEMBER	8	5
TOTAL	**59**	**87**

Source: MIOSHA Information Div., Michigan Dept. of Consumer & Industry Services.

TABLE 11

PROGRAM-RELATED FATALITIES
BY INDUSTRY GROUPS AND DAY OF THE WEEK
MICHIGAN 2000

INDUSTRY GROUP	DAY OF THE WEEK SUN	MON	TUE	WED	THUR	FRI	SAT	TOTAL
AGRICULTURE, FORESTRY AND	-	-	1	-	-	-	-	**1**

FISHING								
OIL AND GAS EXTRACTION	-	-	-	-	-	-	-	**0**
CONSTRUCTION	-	3	4	8	7	2	-	**24**
MANUFACTURING	1	1	4	4	4	3	-	**17**
TRANSPORTATION AND PUBLIC UTILITIES	-	1	-	1	-	1	2	**5**
WHOLESALE TRADE	-	-	1	1	1	3	-	**6**
RETAIL TRADE	-	-	-	-	1	-	-	**1**
FINANCE, INSURANCE & REAL ESTATE	-	-	-	-	-	-	-	**0**
SERVICES	-	1	2	-	-	-	-	**3**
PUBLIC ADMINISTRATION	-	1	-	-	-	-	1	**2**
TOTAL	**1**	**7**	**12**	**14**	**13**	**9**	**3**	**59**

Source: MIOSHA Information Division, Michigan Dept. of Consumer & Industry Services.

TABLE 12

PROGRAM-RELATED FATALITIES BY COUNTY OF OCCURRENCE, MICHIGAN, 2000

COUNTY	NUMBER OF CASES
ALGER	1
ALPENA	1

BERRIEN		1
DICKINSON		1
EATON		1
EMMET	1	
GRAND TRAVERSE		1
INGHAM		1
KENT		7
MACOMB		3
MIDLAND		1
MONROE		2
MUSKEGON		1
OAKLAND		10
OTTAWA		2
SAGINAW		5
ST. CLAIR		1
WASHTENAW		8
WAYNE		11
TOTALS		**59**

Source: MIOSHA Information Division, Michigan Dept. of Consumer & Industry Services

PROGRAM-RELATED FATALITY INCIDENTS
BRIEF DESCRIPTIONS OF CASES BY INDUSTRY GROUPS

Agriculture, Forestry and Fishing:

1. Employee was getting traffic signs out of a truck towing a chipper when an automobile struck the back of the chipper, pinning the employee between the chipper and the truck.

Violations Noted: None

Construction:

1. While lifting a end frame wood truss the lifting device disengaged from the load allowing the truss to fall on the employee

Violations Noted: General Duty
General Rules
Personal Protective Equipment
Lifting and Digging Equipment
Fall Protection
Inspections and Investigations, Citations and Proposed Penalties

2. Employee was unloading equipment elevated on a platform on a rough terrain fork lift. The load became unbalanced causing the employee who was standing on the platform to be thrown off, falling 24 feet to the ground.

Violations Noted: General Rules
Scaffolds

3. Two employee were unloading 6,700 pound pre-cast panels off a trailer. One employee was on top of the trailer and the other one was on the ground. When the banding was cut the outer panel tipped over and struck the employee.

Violations Noted: Personal Protective Equipment
Handling and Storage of Materials

4. A five man crew was tearing out the roof off of a metal frame canopy. No fall protection was used during the process and an employee fell 9 feet to the concrete below.

Violations Noted: Fall Protection
General Rules
Personal Protective Equipment
Demolition

Construction (continued)

5. Employee was dismantling a scaffold without supervision. The scaffold was 50 feet long and erected above a 48 foot high gantry crane. Employee was sitting on a crane beam and a scaffold truss without fall protection. Employee fell 48 feet to the pavement below.

Violations Noted: Scaffolds

6. Employee was moving a concrete barrier with a crane and made contact with 7600 volt overhead lines. The employee was holding onto the spreader cable aligning the barrier.

Violations Noted: Lifting and Digging Equipment
Handling and Storage of Materials

7. Employee was working on a roofing project and fell through a 4 ft by 4 ft dome skylight. .

Violations Noted: Fall Protection
General Rules

8. Employee was installing a water main pipe, the pipe shifted on the load and pinned the worker to the wall of the trench box.

Violations Noted: Lifting and Digging Equipment
Slings

9 - 10. Employee's were moving a 40 foot aluminum extension ladder and contacted 7,620 energized overhead power lines and were electrocuted.

Violations Noted: General Rules
Fixed and Portable Ladders

11. Employee was repairing a house sewer line and was buried when the excavation caved in.

Violations Noted: Excavation, Trenching and Shoring
General Rules
Statutory Rules - Failure to Report Fatality

12. Employee was working on a roof and walked backwards into an unguarded roof opening. The victim fell 22 ft. to the concrete floor below.

Violations Noted: Fall Protection

13. Employee was repairing pot holes and was pinned between two trucks.

Violations Noted: General Rules

Construction (continued)

14. Employee was working on a scaffold platform, 19 ft. 6 inches above the floor with no guardrail system. The employee lost his balance and fell off the platform.

Violations Noted: Scaffolds
Personal Protective Equipment

15. Employee was installing gutter on a house when the house exploded due to a build up of propane gas inside the house. The propane leak had nothing to do with the work operation.

Violations Noted: Statutory Rules - Failure to Report Fatality

16. Employee was attempting to lower an antenna boom on a communication tower. The employee who was the foreman apparently moved to get a better position to align holes and fell to the ground. He was not wearing his fall protection at the time

Violations Noted: Personal Protective Equipment
General Rules
Handling and Storage of Materials
Tools

17. Employee while changing service from old to new triplex, the employee moved his bucket up and contacted a 4800 primary power line. The employee was holding onto the triplex cable which provided a path to the ground.

Violations Noted: None

18. Employee's were upgrading a 225 KVA transformer to a 500 KVA transformer. The employee's went to cabinet 3U and pulled primary elbows and covered exposed bushing where elbow had been.. They then went to door 4U and pulled all three primary elbows. The victim got paper towel to stuff the open holes left from the pulled elbows and proceeded to stuff an elbow hole when the transformer blew up.

Violations Noted: Power Transmission and Distribution
General Rules

19. Employee was working on a cross arm utility pole change and line upgrade when the mack jumper became energized. The employee made contact with the mack and was electrocuted

Violations Noted: None

Construction (continued)

20. Employee was working on a sloped roof of a house and fell 12 ft to the ground below.

Violations Noted: Fall protection
Fixed and Portable Ladders

21. Employee was using a spreader to apply roofing adhesive. He was near the roof edge and flipped the spreader handle to stop the flow of adhesive. He then fell over the edge of the roof while working with the spreader. The warning line had been removed to apply the adhesive.

Violations Noted: Fall Protection
General Rules
Recording and Reporting of Occupational Injuries and Illnesses

22. Employee was working in an excavation to make a sewer lead repair, the backhoe caved into the excavation crushing the worker. The pavement under the backhoe had been under mined.

Violations Noted: Excavation Trenching and Shoring
General Rules
Personal Protective Equipment

23. Employee was part of a crew cutting trees along the side of the roadway. Employee was standing near a pay loader when the tree being cut down fell on a phone line. The utility pole broke in 3 pieces with the top portion of the utility pole striking the employee.

Violations Noted: Tree Trimming and Removal

24. Employee was driving a truck with a load of gravel at the time of the accident. The truck was traveling west and made a right turn to cross a rail road track and was struck by a locomotive engine. The locomotive was traveling west when it struck the truck at the crossing. The employee received multiple body injuries which resulted in his death.

Violations Noted: None

Manufacturing

1. Employee was working at the unloading station of a device that transfers steel from a coiling machine to a machine that loads the coil over on it's side for shipping. Employee was apparently cutting 2 bands which hold several narrow coils together. When the employee cut the bands a coil fell from the loader and pinned him against the frame of the machine that laid the coils over.

Violations Noted: Metalworking Machinery
General Duty

Manufacturing (continued)

2. Employee was in the process of felling a tree with a split trunk when the tree kicked back striking the employee. The employee fell to the ground with the tree falling on top of him.

Violations Noted: Logging
Statutory Rules - Failure to Report Fatality
Inspections and Investigations, Citations and Proposed Penalties

3. Employee was adjusting an electric eye reflector for an automated sand dumping system. The employee was doing this with the system in operation. One of the dumping cars traveling the track in the area where the employee was working pinned the employee to the side of the hopper crushing his chest.

Violations Noted: Lockout/Tagout

4. Employees was lubricating a salt spreader that was mounted in the bed of a pickup truck while the spreader and the truck were running. The employee's clothing got caught in the chain drive system pulling the employee into the equipment.

Violations Noted: Guards for Power Transmission
Conveyors
Personal Protective Equipment

5. Employee was working alone loading a 48 inch precast concrete riser onto a flatbed trailer. The employee was utilizing a hydraulic lifting device with a shop fabricated evener bar that was inserted into holes located inside the concrete riser. It appears that safety pins were not used to hold the evener bar in position causing the precast concrete riser to fall on the employee.

Violations Noted: General Duty

6. Employee was helping another employee install a seal around the rear tailgate. The employee was standing under the raised tailgate and the supports slipped out of position and allowed the tailgate to fall on him.

Violations Noted: Slings
General Provisions

General Duty

7. Employee was standing 72 inches above the floor on the bed of a press attempting to clean a unit switch. The switch had an internal fault causing one of the cover screws to be energized. The employee was electrocuted when he touched the screw.

Violations Noted: Lockout/Tagout
Floor and Wall Openings, Stairways and Skylight

Manufacturing (continued)

8. Employee was a press operator and was found on the floor bleeding. There was no witness to the injury. A part of the die (parts lifter guide block) was found 33 feet from the press he was operating. The part weighed about 15 pounds. It was concluded that the bolts securing the lifter guide block sheared and allowed it to fly from the press striking the employee in the upper chest and throat resulting in a fatal injury.

Violations Noted: General Duty

9. Three employees were trying to unload a cargo container of granite slabs. The granite slabs measured 8 feet by 4 feet and the thickness was from ¾ inch to 1 ¼ inch. One of the employees used a 2 by 4 piece of wood to move a granite slab when the slab fell onto the employee crushing his chest.

Violations Noted: General Provisions

10. Employee was a parts packer. On the day of the incident the employee was working on a clam shell press with the operator of the press. The operator cycled the press and for unknown reasons the other employee was leaning into the press. The press crushed the employee's head and chest.

Violations Noted: Plastic Molding
General Duty

11. The employee was replacing an air cylinder on a transfer machine line and as the employee was making the repair he became pinned by automation from above.

Violations Noted: Lockout/Tagout
General Provisions

12. Employee was operating a fork lift truck to clear a space in the yard for a delivery truck. While attempting to move a short distance with steel racks on the forks of the lift truck, the top rack came in contact with overhead communication lines that dislodged the top rack and it fell on the employee. The fork lift did not have an overhead guard.

Violations Noted: Powered Industrial Trucks

13. It appears that the employee reached into the foam cutting machine as it was cycled by the operator causing the carriage to come down on the employee.

Violations Noted: General Provisions
Plastic Molding
Recording and Reporting of Occupational Injuries and Illnesses

Manufacturing (continued)

14. Employee reached over the barrier guard at the end of the conveyor to retrieve a part that had fallen to the floor. The conveyor cycled catching the employee, dragging the employee into a pinch point between the conveyor and guard frame work.

Violations Noted: Conveyors

15. A crew of employee's were picking up highway cones placing them in the back of a dump truck. One of the employees was standing on the lower tail gate in the back of the moving dump truck taking the cones from another employee who was walking beside the truck picking up cones. The driver of the dump truck was moving from one location to another when he gave the truck some more gas. The employee lost his balance and fell to the ground hitting his head.

Violations Noted: General Duty

16. Employee was caught in a 10,000 pound paddle type food mixer.

Violations Noted: Lockout/Tagout
General Duty
General Provisions

17. Employee was a powered industrial truck driver. The employee was assigned to drive outside and retrieve racks and got stuck in the snow. Another powered industrial truck driver came out and tried to pull him out. The powered industrial truck tipped over crushing the employee's chest.

Violations Noted: Powered Industrial Trucks

Transportation and Public Utilities

1. Employee was riding the rear step on a mobile refuse packer wile the vehicle was moving in reverse. He either fell off or was attempting to get off the truck and was run over as it was backing up.

Violations Noted: Refuse Packer Units

2. Four employee's were performing work on a 140 horsepower natural gas compressor unit at a gas transfer station. When the work was finished the engine for the gas compressor was being started when it backfired causing an explosion. Three employees were knocked down and the fourth employee was propelled into the unit causing the fatality.

Violations Noted: General Duty

Transportation and Public Utilities (continued)

3. Employee was standing atop the overhead guard of a powered industrial truck and slipped and fell to the floor. The employee expired 30 days later.

Violations Noted: General Duty
Floor and Wall Openings, Stairways and Skylight

4. Employee had picked up some sheets of plate steel with a forklift truck to deposit on top of a stationary stack of steel. With the load raised on the forks, he got off the truck to place boards on top of the stationary rack so that the load he was depositing could rest on the boards. While standing between the forks and the stationary stack the sheets of plate metal fell off the forks on him.

Violations Noted: Powered Industrial Trucks
Statutory Rules - Failure to Report Fatality
Recording and Reporting of Occupational Injuries and Illnesses

5. Employee was a semi trailer delivery driver. The lift gate has a traveling position and a lifting position. When lifting it is unfolded to form a platform that is raised and lowered by hydraulics. The lift gate is used to raise and lower the operational and powered pallet jack to unload pallets of stock from the trailer. The lift gate attached to the rear of the trailer came down on top of the employee while he was working under it.

Violations Noted: General Provisions

Wholesale Trade

1. Employee was standing between two vehicles when one apparently drifted into the employee pinning him into the other vehicle.

Violations Noted: Statutory Rules - Failure to Report Fatality

2. Employee was a crane operator and was double stacking or removing a coil of steel from the top of stacked coils. The lower end coil rolled forward causing other coils to fall. The employee came down from the crane cab to check the fallen coils and the other coils fell on the employee causing the fatality.

Violations Noted: General Provisions

3. Employee was riding on the forms of a power industrial truck driven by another employee. The employee fell from the forks of the fork lift and was struck by the truck.

Violations Noted: Powered Industrial Trucks
Statutory Rules - Failure to Report Fatality

Wholesale Trade (continued)

4. Employee was operating an overhead crane moving large coils of steel in the staging area. He apparently lost control of a coil or dislodged a stacked coil and was struck by it. He had only been in the area for 3 days and was in training but working alone.

Violations Noted: Overhead and Gantry Cranes
Statutory Rules - Failure to Report Fatality
General Provisions
Fire Exits

5. Employee was a truck driver and noted that a tarp was caught under a bunk of particle board on the highway flatbed trailer that he was going to deliver. After he pulled the tarp out from under the bunk, he asked for a fork lift operator to lower him to the ground with the fork lift. The employee was fatally injured when he fell down from the forks of the forklift to the asphalt below.

Violations Noted: Powered Industrial Trucks

6. Employee was dumping crushed rock for a packing area the dump truck employee raised the truck box into overhead energized lines.

Violations Noted: General Rules

Retail Trade

1. Employee was climbing out of a skid steer loader equipped with a salt spreader attachment. As the employee climbed over the front end the salt spreader attachment on the loader arms raised up crushing the employee between the spreader and the overhead guard.

Violations Noted: General Duty
General Provisions

Services

1. Employee was driving across an arena on a farm tractor with a rear mower deck attached. The employee apparently leaned over as he was turning and either lost his balance or came in contact with the tire and fell from the tractor. He was run over by the wheel and the mower deck.

Violations Noted: None

2. Employee entered a petroleum tanker trailer to make repairs by welding. During the repairs an explosion occurred causing the fatality

Violations Noted: Welding and Cutting
Confined Space
Hazard Communication

Services (continued)

3. The employee had entered a nitrogen chamber used to perform tests on automotive components. The employee was found apparently frozen due to over exposure to nitrogen. Asphyxiation was the cause of death.

Violations Noted: Confined Space
Hazard Communication
Respiratory Protection
Personal Protection Equipment

Public Administration

1. Employee was a firefighter responding to an apartment fire. Employee was trapped on the second floor while performing a rescue when the fire flashed. The firefighter was extracted from the fire by ladder truck.

Violations Noted: Hazard Communication

2. A microbiological section employee died of meningococcemia. The agent was Neisseria meningitides and there was a DNA match to a sample of Neisseria meningitides handled by the employee

Violations Noted: General Duty